

- Fig. 3. *Heterotanis Örstedii*, Kröyer. Cheliped, ♂, outer face. After F. Muller.
- Fig. 4. *Eurydice rotundicauda*, sp. n. Antennules and antennæ.
- Fig. 5. " " First leg.
- Fig. 6. " " Seventh leg.
- Fig. 7. " " Telson and uropods.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

April 5th, 1905.—J. E. Marr, Sc.D., F.R.S.,
President, in the Chair.

The following communication was read:—

‘On the Divisions and Correlation of the Upper Portion of the Coal-Measures, with special reference to their Development in the Midland Counties of England.’ By Robert Kidston, F.R.S. L. & E., F.G.S.

The following classification of the Coal-Measures is proposed by the Author:—

<i>Proposed Names.</i>	<i>Names previously used.</i>
4. Radstockian Series	= Upper Coal-Measures.
3. Staffordian Series	= Transition-Series.
2. Westphalian Series	= Middle Coal-Measures.
1. Lanarkian Series	= Lower Coal-Measures (including the Mill-stone-Grit).

The Staffordian Series includes the Blackband Group beginning with the Bassey-Mine Ironstone, the Etruria-Marl Group, nearly barren of plant-remains, and the Newcastle-under-Lyme Group. The Radstockian Series includes the Keele Group and various beds in the Midland Coalfields hitherto referred to the Permian System. A classified table is given of all the plants known from the two upper Series in the Potteries Coalfield, and a list of those observed in the Newstead boring, Trentham. The plant-yielding beds in the shaft of the Hamstead Colliery, near Birmingham, between the depths of 243 and 411 yards from the surface, are undoubtedly referable to the Radstockian Series and to the Keele Group of the Potteries Coalfield; and the beds without plants, from 209 yards downward, belong to the same group. A bed at 440 yards is referable to the Newcastle Group. A list of these plants is given. These two Series are recognizable in Denbighshire; and the

Ruabon Marls of the Staffordian Series are as barren in plant-remains as the corresponding Etruria Marls. A list is also given from red and purple shales in Cumberland, which contain Upper Coal-Measure plants. Part of the Ardwick Series of Manchester belongs to the Staffordian Series. A table of all plants known from the two upper Series (3 & 4) is next given, the distribution of species in the four subdivisions is analysed, and the differences between the two Series are discussed. Finally, a list of plants from the Bradford Colliery, Manchester, from shales extending from 8 to 107 yards above the 'Bradford Four-Foot Coal,' is appended, and the leds are placed in the Staffordian Series; while the species from shale immediately below this coal, and from shale 88 yards lower down, are classed with the Westphalian Series.

November 22nd, 1905.—J. E. Marr, Sc.D., F.R.S.,
President, in the Chair.

The following communication was read:—

'On a New Specimen of the Chimæroid Fish, *Myriacanthus paradoxus*, Ag., from the Lower Lias of Lyme Regis (Dorset).' By Arthur Smith Woodward, LL.D., F.R.S., F.L.S., F.G.S.

The Author, having proved that the dorsal fin-spine of the so-called *Ischyodus orthorhinus* is identical with an ichthyodorulite which has been named *Myriacanthus granulatus*, inferred that the larger ichthyodorulite *M. paradoxus* belonged to the same fish as the larger dentition named *Prognathodus Guentheri* by Egerton. This question has been settled by the discovery by Mr. S. Curtis, in the Lower Lias of Black Ven, of a dorsal fin-spine in direct connection with a mass of decayed cartilage, dermal plates, and teeth. On the specimen the following parts are recognized:—the left and left palatine dental plates, right mandibular dental plate, cartilage of the pectoral arch, præsymphysial tooth, rostral cartilage, frontal spine or tentaculum, and vomerine dental plate, dermal plates, and the dorsal fin-spine. The new fossil warrants the conclusion that *Myriacanthus* is a Chimæroid, closely similar to the Upper Jurassic *Chimæropsis*, with (i) a median chisel-shaped tooth in front of the lower jaw, (ii) a few tuberculated dermal plates on the head, and (iii) a tuberculated dorsal fin-spine. In these respects it differs from all other known Chimæroids—even from the comparatively-primitive types which have been discovered during recent years in the Japanese seas. The Myriacanthidæ, in fact, have still no nearer ally than *Callorhynchus*, with which Egerton originally compared his so-called *Ischyodus orthorhinus*.